Progress toward

SHAPING OUR FUTURE

SERVICES AND SOLUTIONS FOR A LIVABLE REGION

NOVEMBER 30, 2017
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INTRODUCTION AND BACKGROUND

Metro Vancouver 2040: Shaping our Future

*Metro Vancouver 2040: Shaping our Future* (Metro 2040), the regional growth strategy, is the shared vision to guide urban growth in the province’s largest metropolitan region.

Metro 2040 was created, adopted, and continues to be implemented by Metro Vancouver (GVRD), 21 member jurisdictions and TransLink.

The Importance of Performance Monitoring

The Progress toward Shaping Our Future annual reports monitor regional performance and provide a framework for discussions of Metro 2040 implementation among Metro Vancouver Board members, member jurisdictions, TransLink, other regional agencies, and the general public. Metro Vancouver recognizes the important role performance monitoring plays in the implementation of the regional growth strategy and collective decision-making.

The Metro 2040 performance measures provide the information necessary to benchmark and monitor our progress. Each year, the Greater Vancouver Regional District (GVRD) Board reviews the annual reports to evaluate the state of the region, how well we are doing and what issues may need further attention.

Performance Monitoring Requirements

Annual reporting of Metro 2040 is required by Part 13 of the British Columbia Local Government Act, and by Metro 2040 Section 6.13.3. A list of Key Summary Measures (defined in the following section, and provided on page 8 and 9 of this document) were adopted into Metro 2040 (Section G: Performance Monitoring).

About this Guideline

The Performance Monitoring Guideline provides additional, often more detailed or technical performance measures that are not included in Metro 2040 Section G, and includes detailed information about all performance measures, such as sources, methodologies and monitoring timelines.

The intent of the Guideline is to provide a resource to those using the performance monitoring data, including regional and municipal staff and researchers. In addition, the Guideline is intended to provide an added level of transparency and accountability in the planning process to politicians and the public. Detailing performance monitoring methodologies and intents, as they relate to the policies in Metro 2040, ensures progress toward goals is being tracked clearly and consistently over time.

The Guideline includes information about types of performance measures, reporting requirements, and communication mediums. The bulk of the Guideline provides detailed information about the intent, methodology, data source, and reporting timeline for each measure, including those Key Summary Measures provided in Section G of Metro 2040, and other detailed / technical measures.

The Guideline can be updated by the GVRD Board if new measures or data sources are identified in the future.

Reporting Formats

Performance Measures are reported online as data is available. An annual report is provided to the GVRD Board and member jurisdictions, highlighting updates to Key Summary Measures and providing additional information about implementation as necessary.
Procedural Reporting

Procedural reporting is also conducted annually and provided to the GVRD Board and member jurisdictions. The Greater Vancouver Regional District Regional Growth Strategy Procedures Bylaw No. 1148, 2011 (RGS Procedures Bylaw) was adopted by the GVRD Board in July 2011 at the same time as the regional growth strategy. The RGS Procedures Bylaw includes requirements for reporting on procedural performance associated with Metro 2040, such as the number of amendments processed and resources required to implement the regional growth strategy.

Procedural reporting details information about supporting work to implement Metro 2040, progress on the completion of, or updates to regional context statements, and Metro 2040 amendments (including status and processing times for each amendment), as well as information about costs and staffing related to implementation of the regional growth strategy.

Measure Types and Purpose

KEY SUMMARY MEASURES
A measure of impact/outcome of Goals and Strategies.

Key Summary Measures provide an overview of how well Metro 2040 Goals and Strategies are being achieved. Key Summary Measures are targeted to a broader, non-technical audience and are meant to quickly illustrate progress. In annual reporting, these measures will be communicated as a single number or chart that can easily depict change over time.

STRATEGY PERFORMANCE MEASURES
A measure of impact/outcome of Goals and Strategies.

Strategy Performance Measures provide more detail on achievement of specific Strategies and policy actions. These measures are meant to support implementation of Metro 2040 and are aimed at a more technical audience. Detailed datasets will be provided online.

CONTEXT MEASURES
A description of broader trends to help make sense of other measures in the broader planning context.

These measures are helpful for all audiences and provide important contextual or background information, particularly in communications that tell the story of change or progress.

PARTICIPATION MEASURES
A measure of what’s been accomplished by Metro Vancouver or member jurisdictions towards achievement of goals.

These measures are primarily for use by planners and analysts to make comparisons of the effect of different policies on a given planning challenge.

Reporting Timelines

Some measures are reported in the short-term (every 1-2 years), while some are reported in medium-term intervals (every 3-5 years).

Measures that are dependent upon Census data will only be reported in 5 year intervals, following the release of Census data and the procurement of custom run data.

Measures that are dependent on Metro Vancouver inventories will be reported in 3-5 year intervals following inventory updates.

Measures that are dependent on external data collection, such as TransLink’s Trip Diary will be updated following data releases, most typically at 3-5 year intervals.

Metro Vancouver will make an effort to update, or estimate change for measures on short-term basis as data and resources allow.
METRO 2040 KEY SUMMARY MEASURES

Reports on the Key Summary measures listed in this section will be provided annually. Some measures can be monitored in the short-term (1-2 years) while others can be monitored in the medium term (3-5 years). Some measures are noted as proxy measures and will be replaced in the future as improved data is available.

Regional Land Use Designations

REGIONAL DESIGNATIONS AND OVERLAYS
As measured by:
• total and cumulative change in hectares of land in each of the six regional land use designations
• total and cumulative change in hectares of land in the Urban Containment Boundary
• total and cumulative change in number of Urban Centres
• total and cumulative change in number of Frequent Transit Development Areas

Short-term measure.

Goal 1:
Create a Compact Urban Area

URBAN CONTAINMENT
As measured by:
• percent of regional dwelling unit growth located within the Urban Containment Boundary

Short-term estimate & medium-term cumulative measure.

GROWTH IN PRIORITY AREAS
As measured by:
• percent of regional dwelling unit growth located in Urban Centres
• percent of regional dwelling unit growth located in Frequent Transit Development Areas

Short-term estimate & medium-term cumulative measure.

Goal 2:
Support a Sustainable Economy

EMPLOYMENT IN PRIORITY AREAS
As measured by:
• percent of regional employment growth located in Urban Centres
• percent of regional employment growth located in Frequent Transit Development Areas

Medium-term measure.

EMPLOYMENT ACCESSIBILITY
As measured by:
• average number of kilometres travelled for commute region-wide
• average number of minutes travelled for commute region-wide

Medium-term measure.

INDUSTRIAL AND MIXED EMPLOYMENT AREAS
As measured by:
• percent of land designated Industrial and Mixed Employment that is developed

Medium-term measure.

AGRICULTURAL AREAS
As measured by:
• percent of land designated Agricultural that is actively farmed

Medium-term measure.
Goal 3: Protect the Environment and Respond to Climate Change Impacts

ECOSYSTEM HEALTH
As measured by:
- hectares of land inventoried as a Sensitive or Modified Ecosystem
- percent of inventoried Sensitive and Modified Ecosystems rated high quality

CLIMATE CHANGE MITIGATION
As measured by:
- tonnes and percent of regional greenhouse gas emissions produced by building and on-road transportation sources

CLIMATE CHANGE PREPAREDNESS
As measured by:
- climate adaptation planning efforts (proxy measure)

Goal 4: Develop Complete Communities

HOUSING AFFORDABILITY
As measured by:
- percent of median household income spent on average housing and transportation cost

HOUSING DIVERSITY
As measured by:
- share of estimated regional rental housing demand achieved in new supply

COMPLETE COMMUNITIES AND HEALTH
As measured by:
- walkability

Goal 5: Support Sustainable Transportation Choices

TRAVEL MODE CHOICE
As measured by:
- percent of total trips that are private vehicle-based
- percent of residents within walking distance of the Frequent Transit Network

ROAD AND VEHICLE USE AND SAFETY
As measured by:
- annual per capita vehicle kilometres travelled
**REGIONAL LAND USE MEASURES**

Regional Land Use Designations and Overlays

**Key Summary Measures**
The following Key Summary Measures are listed in *Metro 2040* Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

<table>
<thead>
<tr>
<th>Key Summary Measure</th>
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<tbody>
<tr>
<td><strong>Regional Land Use Designations</strong></td>
</tr>
<tr>
<td>CHANGE IN REGIONAL LAND USE DESIGNATIONS</td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Total and cumulative change in hectares of land in each of the six regional land use designations.
- Total and cumulative change in hectares of land within the Urban Containment Boundary.

**REPORTING & TIMELINE**
Annual and cumulative measure.
Reported online and in annual reports as data is available.

**SOURCE**
Metro Vancouver Regional Planning geodata for the *Metro 2040* regional land use designations.

**METHODOLOGY**
Changes to the regional land use designations occur only through GVRD Board adopted amendments or generally consistent amendments within Regional Context Statements adopted by municipal Councils and accepted by the GVRD Board. Cumulative change is tracked from the adoption of the plan. Major amendments are noted.

**INTENT**
Regional land use designations and overlays are key tools in achieving the five goals of *Metro 2040*. This measure monitors annual and cumulative change in the designations over time.
### Regional Land Use Designations

#### CHANGE IN REGIONAL LAND USE OVERLAYS

**Key Summary Measure**

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Total and cumulative change in number and hectares of Urban Centres.</td>
</tr>
<tr>
<td>• Total and cumulative change in number and hectares of Frequent Transit Development Areas.</td>
</tr>
</tbody>
</table>

#### REPORTING & TIMELINE

- Annual and cumulative measure.
- Reported online and in annual reports as data is available.

#### SOURCE

Metro Vancouver Regional Planning geodata for *Metro 2040* Urban Centre / Frequent Transit Development Area (FTDA) boundaries.

#### METHODOLOGY

Urban Centres and FTDAs, and their boundaries, are identified Regional Context Statements adopted by municipal Councils and accepted by the GVRD Board. FTDAs are created in consultation with the member jurisdiction, Metro Vancouver and TransLink. Cumulative change is tracked from the adoption of the plan. Major amendments are noted.

#### INTENT

Regional land use designations and overlays are key tools in achieving the five goals of *Metro 2040*. This measure monitors annual and cumulative change in the overlays over time.
GOAL 1 MEASURES
Create a Compact Urban Area

Key Summary Measures
The following Key Summary Measures are listed in *Metro 2040* Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

<table>
<thead>
<tr>
<th>Urban Containment</th>
<th>GROWTH WITHIN THE URBAN CONTAINMENT BOUNDARY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key Summary Measure</strong></td>
<td></td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Percent of regional dwelling unit growth located within the Urban Containment Boundary.

**REPORTING & TIMELINE**
Annual estimate (mid-year to mid-year). Five-year cumulative measure reported following Census data release.
Reported online and in annual reports as data is available.

**SOURCE**
Metro Vancouver Regional Planning geodata for the *Metro 2040* General Urban Containment Boundary.
Five-year intervals: Statistics Canada, Census.
Annually (mid-year to mid-year): BC Statistics, CMHC Completions and Demolitions, Municipal Building Permits (for estimated residential growth).

**METHODOLOGY**
Residential growth is estimated by Metro Vancouver and reported annually. Employment growth is reported at 5-year intervals following the release of Census data.
Changes to the UCB occur only through GVRD Board adopted amendments or regionally consistent amendments within adopted and accepted RCSs. Growth is tracked based on the 2011 Urban Containment Boundary.

**INTENT**
*Metro 2040* targets 98% of dwelling unit growth to areas within the Urban Containment Boundary. This measure illustrates the performance of the Urban Containment Boundary as a tool to contain growth.
## Growth in Priority Areas

### RESIDENTIAL DEVELOPMENT IN PRIORITY AREAS

**Key Summary Measure**

**AS MEASURED BY**
- Percent of regional dwelling unit growth located in Urban Centres.
- Percent of regional dwelling unit growth located in Frequent Transit Development Areas.

**REPORTING & TIMELINE**

Annual estimate (mid-year to mid-year). Five-year cumulative measure reported following Census data release.

Combined percentage of regional growth to Urban Centres and FTDAs provided in annual reports as data is available. Breakdown by individual Urban Centres and FTDAs reported online as data is available.

**SOURCE**

Metro Vancouver Regional Planning geodata for *Metro 2040* Urban Centre / Frequent Transit Development Area (FTDA) boundaries.

Five-year intervals: Statistics Canada, custom Census runs.

Annually (mid-year to mid-year): Residential growth shares estimated based on BC Statistics, CMHC Completions and Demolitions, Municipal Building Permits.

**METHODOLOGY**

Share of residential growth by Urban Centre type and for areas in close proximity to transit is estimated by Metro Vancouver and reported annually. Detailed figures for Urban Centres and FTDAs are reported at 5-year intervals following the release of Census data.

Metro Vancouver maintains geodata for Urban Centre and FTDA boundaries and submits the geographies to Statistics Canada for custom Census data. Boundaries are established and adjusted through regional context statements adopted by municipal Councils and accepted by the GVRD Board.

**INTENT**

*Metro 2040* targets 40% of dwelling unit growth to Urban Centres, for a total of 31% of dwelling units to be located in Urban Centres by 2041. *Metro 2040* also targets 28% of dwelling unit growth, for a total of 27% of dwelling units to be located in FTDAs by 2041.
Supplementary Measures
The following Strategy Performance, Context, and Participation Measures are supplementary to the Key Summary Measures. These measures may be reported out online as data and resources are available. The intent of supplementary measures is to illustrate progress, serve as a resource to member jurisdictions, and inform implementation.

<table>
<thead>
<tr>
<th>Contain Development</th>
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<tbody>
<tr>
<td><strong>REMAINING URBAN DEVELOPMENT</strong></td>
</tr>
<tr>
<td><strong>Strategy Performance Measure</strong></td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Percent of regional dwelling unit growth occurring in remaining General Urban areas.
- Net change in number of hectares of remaining General Urban areas.

**REPORTING & TIMELINE**
Annual estimate (mid-year to mid-year).
Reported online annually.

**SOURCE**
Metro Vancouver Regional Planning geodata for remaining areas in the *Metro 2040* General Urban designation.
BC Statistics, CMHC Completions and Demolitions and Municipal Building Permits.

**METHODOLOGY**
Remaining urban areas are lands that have a General Urban designation, but are not yet substantially developed. These areas have been identified through aerial photos and assessment of municipal plans. Absorption estimates are based on analysis of the above residential development statistics sources.

**INTENT**
Metro Vancouver estimates that 75% to 80% of growth will occur through infill or redevelopment in established General Urban areas. The remaining 20-25% will occur through new development in remaining General Urban areas.
# Contain Development

## ANNUAL GROWTH

### Context Measure

**AS MEASURED BY**
- Annual regional and municipal population growth.
- Annual regional and municipal dwelling unit growth.
- Annual regional and municipal employment growth.

**REPORTING & TIMELINE**
Annual estimate (mid-year to mid-year). Five-year cumulative measure reported following Census data release.
Reported online annually.

**SOURCE**
Five-year intervals: Statistics Canada, Census.
Annually (mid-year to mid-year): BC Statistics, CMHC Completions and Demolitions, Municipal Building Permits (for population and dwelling units). Annual regional employment estimated as a percentage of total population.

**REPORTING METHODOLOGY & TIMELINE**
Total and growth in population and dwelling units reported annually for Metro Vancouver and member jurisdictions based on Metro Vancouver analysis; 5-year reporting from Census, including estimated Census undercount.
Total and growth in employment reported annually for Metro Vancouver (estimated as a percentage of the total population) and on 5-year basis for the region and member jurisdictions from Census, including estimated Census undercount.

**INTENT**
Growth projections are generated by a regional growth model and confirmed with member jurisdictions. The projections are not targets. Growth that vastly and consistently differs from the projections may trigger an update to the growth model, and potential policy considerations.
Growth in Priority Areas

DENSITY IN PRIORITY AREAS
Strategy Performance Measure

AS MEASURED BY
- Average number of dwelling units per hectare of land with a General Urban designation within Urban Centres.
- Average number of dwelling units per hectare of land with a General Urban designation within Frequent Development Areas.
- Average number of dwelling units per hectare of land with a General Urban designation outside of Urban Centres and Frequent Development Areas within the Urban Containment Boundary.

REPORTING & TIMELINE
Five-year estimate.
Reported online every five-years.

SOURCE
Metro Vancouver Regional Planning geodata for lands with a Metro 2040 General Urban designation and Urban Centre / Frequent Transit Development Area (FTDA) boundaries.

Metro Vancouver Growth Model (traffic zone analysis): Statistics Canada custom Census runs; BC Statistics, CMHC Completions and Demolitions, Municipal Building Permits.

METHODOLOGY
Density is measured as a ratio of dwelling units to Metro 2040 General Urban area (hectares) and Urban Centre / FTDA geographies. The measure is best illustrated graphically with Urban Centre and FTDA boundaries, and the Frequent Transit Network overlaid.

This measure is not monitored annually as changes would not accurately depict long-term trends.

INTENT
Higher density growth is anticipated to occur in Urban Centres, particularly Regional City Centres, and in areas along the Frequent Transit Network.
## Protect Other Lands

### SEWER SERVICE CONNECTIONS

#### Strategy Performance Measure

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Number and status of new regional sewerage service connection applications made for areas outside of the Urban Containment Boundary (UCB) to lands with an Agricultural, Rural, or Conservation and Recreation regional designation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual measure (January to December).</td>
</tr>
<tr>
<td>Reported online annually.</td>
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<table>
<thead>
<tr>
<th>SOURCE</th>
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</thead>
<tbody>
<tr>
<td>Metro Vancouver Liquid Waste Services and Regional Planning Departments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of Metro Vancouver applications (submitted, approved, denied, or under consideration) by designation area outside of the UCB, and percent of total applications outside of the UCB for the calendar year (January to December).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>While sewerage extensions beyond the Urban Containment Boundary are generally not expected, <em>Metro 2040</em> and associated guidelines allow for such extensions under certain exceptions. Sewerage extension applications may be approved without resulting in a net increase in sewerage connections outside of the UCB.</td>
</tr>
</tbody>
</table>
## Protect Other Lands
### RURAL DEVELOPMENT
#### Strategy Performance Measure

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
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<tbody>
<tr>
<td>Number of new residential developments by type and municipality on land designated Rural.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual estimate (mid-year to mid-year).</td>
</tr>
<tr>
<td>Reported online annually.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Vancouver Regional Planning geodata of lands with a Rural regional designation.</td>
</tr>
<tr>
<td>BC Statistics, CMHC Completions and Demolitions and Municipal Building Permits.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total residential growth estimated annually and categorized broadly as follows:</td>
</tr>
<tr>
<td>Large lot single family (one acre or more)</td>
</tr>
<tr>
<td>Small lot singe family (less than one acre)</td>
</tr>
<tr>
<td>Cluster development (lot with more than one unit where the undeveloped portion of the lot is greater than the developed portion of the lot).</td>
</tr>
</tbody>
</table>

## INTENT
About 1% of residential growth is anticipated to occur on lands designated Rural by 2040 and the form of this growth has implications for regional planning. The intent of Metro 2040 is to maintain the rural character of lands with the Rural designation, however, there is no prescribed density for this lands.
GOAL 2 MEASURES
Support a Sustainable Economy

Key Summary Measures
The following Key Summary Measures are listed in Metro 2040 Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

<table>
<thead>
<tr>
<th>Employment in Priority Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOB GROWTH IN PRIORITY AREAS</td>
</tr>
<tr>
<td>Key Summary Measure</td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Percent of regional employment growth located in Urban Centres.
- Percent of regional employment growth located in Frequent Transit Development Areas.

**REPORTING & TIMELINE**
Five-year measure reported following Census data release.
Combined percentage of regional growth to Urban Centres and FTDAs provided in annual reports as data is available. Breakdown by individual Urban Centres and FTDAs reported online as data is available.

**SOURCE**
Metro Vancouver Regional Planning geodata for Metro 2040 Urban Centre / Frequent Transit Development Area (FTDA) boundaries.
Statistics Canada custom data runs for geographic areas above, Census / NHS Place of Work data.

**METHODOLOGY**
Urban Centre and FTDA boundaries are established and adjusted through regional context statements adopted by municipal councils and accepted by the GVRD Board.
Statistics Canada classifies jobs as having a usual / fixed place of work, working at home, or having no fixed workplace. This measure includes the total employed population aged 15 years and over with jobs with a usual / fixed place of work, or working at home.

**INTENT**
Metro 2040 targets 50% of employment growth to Urban Centres, for a total 43% of employment to be located in Urban Centres by 2041. Metro 2040 also targets 27% of employment growth to FTDAs, 24% of employment to be located in FTDAs by 2041.
### Employment Accessibility

#### COMMUTE TIME AND DISTANCE

**Key Summary Measure**

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
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</thead>
<tbody>
<tr>
<td>• Average number of kilometres travelled for commute region-wide.</td>
</tr>
<tr>
<td>• Average number of minutes travelled for commute region-wide.</td>
</tr>
</tbody>
</table>

#### REPORTING & TIMELINE

Five-year measure reported following Census and Trip Diary data release.

Regional averages provided in annual reports as data is available. Breakdown by mode and subregion reported online as data is available.

#### SOURCE

Statistics Canada Census / NHS median commuting durations and custom data runs for cross tabs and geographic areas.

TransLink Regional Trip Diary Data or Analysis Report, trip length by trip purpose.

#### METHODOLOGY

Statistics Canada classifies jobs as having a usual / fixed place of work, working at home, or having no fixed workplace. This measure includes the total employed population aged 15 years and over with a usual place of work or no fixed workplace address.

TransLink’s Trip Diary estimates trip data on a typical fall weekday. Each trip is allocated to a trip purpose, one of which is Work / Post Secondary (including return trips home from those locations). Trip lengths are estimated for each reported trip based on the geocoded locations of trip start and end points.

#### INTENT

*Metro 2040* aims to support more employment close to where people live. Average commute length and duration serve as indicators of employment accessibility. While an overall reduction in commute length and duration is a positive, analysis of this measure should be carefully balanced with analysis of Employment in Priority Areas measures, as commute length and duration could increase as use of transit increases, indicating jobs and dwelling units are locating in close proximity to transit, but jobs are not being filled by local residents.
**Industrial and Mixed Employment Areas**

**INDUSTRIAL AND MIXED EMPLOYMENT LAND USE**

**Key Summary Measure**

**AS MEASURED BY**
- Percent of land designated Industrial or Mixed Employment in *Metro 2040* that is ‘developed’.

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following each update of the Metro Vancouver Industrial Lands Inventory.

**SOURCE**

Metro Vancouver Industrial Lands Inventory (ILI).

Metro Vancouver Regional Planning geodata for the *Metro 2040* Industrial and Mixed Employment designation.

**METHODOLOGY**

The ILI inventories parcels that are regionally or municipally designated or zoned for industrial uses. Some areas, including the Vancouver International Airport, and road and utility rights-of-way, though designated Industrial or Mixed Employment in *Metro 2040*, are not captured in the inventory.

For the purposes of annual reporting, ‘developed’ lands are those with industrial and quasi-industrial uses. ‘Developed’ lands may also include lands with some non-industrial uses that are building intensive and not likely to redevelop to industrial uses. ‘Vacant’ lands are those lands that are anticipated to redevelop to industrial uses. Specifically, these include lands that are municipally designated industrial, but currently are used for agriculture, residential, or resource extraction.

**INTENT**

*Metro 2040* aims to ensure there is sufficient industrial capacity to meet the needs of the regional economy. Estimated absorption rates are provided in the Metro Vancouver 2015 Industrial Lands Inventory - Summary Report. Further information about supply and demand will be made available through the Industrial Lands Initiative.
### Agricultural Areas

#### AGRICULTURAL LAND USE

**Key Summary Measure**

**AS MEASURED BY**

- Percent of land designated Agricultural in *Metro 2040* that is ‘actively farmed’.

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following each update of the Regional Agricultural Land Use Inventory for Metro Vancouver.

**SOURCE**

- Ministry of Agriculture (MoA), Regional Agricultural Land Use Inventory (ALUI), The Metro Vancouver Regional Report and data made available by the MoA.
- Metro Vancouver Regional Planning geodata for the *Metro 2040* Agricultural designation.
- Agricultural Land Commission geodata for the Agricultural Land Reserve (ALR) boundaries.

**METHODOLOGY**

The ALUI inventories all parcels that are within the ALR, have a *Metro 2040* Agricultural designation, or have farm class status.

For the purposes of annual reporting, actively farmed includes land that was farmed at the time of the inventory, as well as areas that support farming, such as farm buildings and roads. Land with potential for farming includes lands that do not have any significant topographical, physical, or exiting land use constraints (natural, semi-natural, managed vegetation, or non-built/bare areas). Land that is unavailable for farming is land that has an existing incompatible use (e.g. parks, golf courses, residences), land with site limitations (drainage or topography), or rights-of-way.

**INTENT**

*Metro 2040* aims to increase actively farmed land.
Supplementary Measures

The following Strategy Performance, Context, and Participation Measures are supplementary to the Key Summary Measures. These measures may be reported out online as data and resources are available. The intent of supplementary measures is to illustrate progress, serve as a resource to member jurisdictions, and inform implementation.

Employment in Priority Areas

OFFICE DEVELOPMENT IN PRIORITY AREAS

Strategy Performance Measure

AS MEASURED BY

- Percent of office space development locating in Urban Centres by Urban Centre Type.
- Percent of office space development locating in FTDAs.
- Percent of office space development locating within 400 metres of the Frequent Transit Network or within 800 metres of a rapid transit station.

REPORTING & TIMELINE

Online as data is available.

SOURCE

Metro Vancouver Regional Planning geodata for Metro 2040 Urban Centre / Frequent Transit Development Area (FTDA) boundaries.

Metro Vancouver Office Inventory (geodata).

Frequent Transit Network (FTN) and rapid transit station geodata is provided by TransLink; latest versions are available upon request.

METHODOLOGY

The inventory includes all offices in region 10,000 square feet or larger and is based on commercial real estate brokers data and municipal data.

The FTN is a network where transit service runs at least every 15 minutes in both directions throughout the day and into the evening, every day of the week. A 400 metre buffer around the FTN is used to identify a walk catchment (approximately 5 minutes) to frequent transit service, and an 800 metre buffer around rapid transit stations is used to identify a walk catchment (approximately 10 minutes) to rapid transit service.

Rapid transit includes SkyTrain and Canada Line stations, as well as Sea Bus if frequent service is provided, not West Coast Express stations.

INTENT

Metro 2040 encourages locating office and retail development in Urban Centres to support employment growth in these locations and to support the development of complete communities with access to a range of services and amenities.
### Employment in Priority Areas

**RETAIL DEVELOPMENT IN PRIORITY AREAS**

**Strategy Performance Measure**

**AS MEASURED BY**

- Estimated percent of businesses in the retail trade sector located in Urban Centres and Frequent Transit Development Areas.
- Employed Labour Force in Urban Centres and Frequent Transit Development Areas in the retail trade sector.

**REPORTING & TIMELINE**

Online as data is available.

**SOURCE**

- Metro Vancouver Regional Planning geodata for *Metro 2040* Urban Centre / Frequent Transit Development Area (FTDA) boundaries.
- Metro Vancouver Dun and Bradstreet Business Database (geodata), purchased by Metro Vancouver. Some use limitations apply.
- Statistics Canada Census Place of Work data.

**METHODOLOGY**

Businesses identified with a primary North American Industry Classification System (NAICS) code beginning in 44 or 45 are classified as Retail Trade. The Retail Trade sector comprises establishments engaged in retailing merchandise, generally without transformation, and rendering services incidental to the sale of merchandise. The category includes both store and non-store retails. Retail establishments include office supply stores, computer and software stores, building materials dealers, plumbing supply stores, and electrical supply stores. Catalog showrooms, gasoline stations, automotive dealers and mobile home dealers are also treated as store retailers.

**INTENT**

*Metro 2040* encourages locating office and retail development in Urban Centres to support employment growth in these locations and to support the development of complete communities with access to a range of services and amenities.
Employment Accessibility
EMPLOYMENT CLOSE TO HOME
Strategy Performance Measure

AS MEASURED BY
- Percent of residents Living and working in the same subregion.
- Percent of jobs held by residents working in the same subregion of the job location.

REPORTING & TIMELINE
Online as data is available.

SOURCE
Statistics Canada National Household Survey, including estimated Census undercount; Statistics Canada Labour Force Survey

METHODOLOGY
Statistics Canada classifies jobs as having a usual / fixed place of work, working at home, or having no fixed workplace. This measure includes the total employed population aged 15 years and over with jobs with a usual / fixed place of work, or working at home.

INTENT
Metro 2040 aims to support more employment close to where people live. This measure tracks employment growth and distribution as context for economic activity and employment across the region.
Employment Accessibility

EMPLOYMENT LEVELS
Context Measure

AS MEASURED BY
• Jobs to labour force ratio for each subregion.

REPORTING & TIMELINE
Online as data is available.

SOURCE
Metro Vancouver established subregions based on jurisdictional boundaries for the purpose of Metro 2040 monitoring.
The subregions are:
• North Shore (North Vancouver City, North Vancouver District, West Vancouver, and Lions Bay)
• Vancouver - UBC/UEL
• Richmond - Delta - Tsawwassen First Nation
• Burnaby - New Westminster
• Surrey - White Rock
• Northeast Sector (Coquitlam, Port Coquitlam, Port Moody, Anmore and Belcarra)
• Ridge - Meadows (Maple Ridge and Pitt Meadows)
• Langleys (Langley City and Langley Township)
Statistics Canada Census / National Household Survey, including estimated Census undercount; Statistics Canada Labour Force Survey.

METHODOLOGY
Statistics Canada classifies jobs as having a usual / fixed place of work, working at home, or having no fixed workplace. This measure includes the total employed population aged 15 years and over with jobs with a usual / fixed place of work, or working at home.

INTENT
Metro 2040 aims to support more employment close to where people live. This measure tracks employment growth and distribution as context for economic activity and employment across the region.
## Employment Accessibility

### EMPLOYMENT TYPES AND LOCATIONS

**Context Measure**

<table>
<thead>
<tr>
<th><strong>AS MEASURED BY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Total number and growth of employment by sector for each subregion.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>REPORTING &amp; TIMELINE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Online as data is available.</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>SOURCE</strong></th>
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</thead>
<tbody>
<tr>
<td>Metro Vancouver established subregions based on municipal boundaries for the purpose of <em>Metro 2040</em> monitoring.</td>
</tr>
</tbody>
</table>

The subregions are:

- North Shore (North Vancouver City, North Vancouver District, West Vancouver, and Lions Bay)
- Vancouver - UBC/UEL
- Richmond - Delta - Tsawwassen First Nation
- Burnaby - New Westminster
- Surrey - White Rock
- Northeast Sector (Coquitlam, Port Coquitlam, Port Moody, Anmore and Belcarra)
- Ridge - Meadows (Maple Ridge and Pitt Meadows)
- Langleys (Langley City and Langley Township)

Statistics Canada Census / National Household Survey (place of work), including estimated Census undercount; Statistics Canada Labour Force Survey.

<table>
<thead>
<tr>
<th><strong>METHODOLOGY</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Canada classifies jobs as having a usual / fixed place of work, working at home, or having no fixed work location. This measure includes the total employed population aged 15 years and over with jobs with a usual / fixed place of work, or working at home.</td>
</tr>
</tbody>
</table>

Employment is measured by industry sector and industries may employ workers with a variety of occupations, such as a mining company with an accountant on staff.

<table>
<thead>
<tr>
<th><strong>INTENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to support a diverse regional economy. This measure tracks employment growth and distribution as context for economic activity and employment across the region.</td>
</tr>
</tbody>
</table>
### Agricultural Areas

**ACTIVE FOOD PRODUCING LANDS**

**Strategy Performance Measure**

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percent of lands designated Agricultural with active food production</td>
</tr>
</tbody>
</table>

**REPORTING & TIMELINE**

Online as data is available.

**SOURCE**

- Ministry of Agriculture (MoA), Regional Agricultural Land Use Inventory (ALUI), The Metro Vancouver Regional Report and data made available by the MoA.
- Metro Vancouver Regional Planning geodata for the *Metro 2040* Agricultural designation.
- Agricultural Land Commission geodata for the Agricultural Land Reserve (ALR) boundaries.

**METHODOLOGY**

The ALUI inventories all parcels that are within the ALR, have a *Metro 2040* Agricultural designation, or have farm class status.

For the purposes of annual reporting, lands under active food production are based on those lands captured within the ALUI as actively farmed cultivated land and greenhouse area. Food producing lands include lands actively farmed with berry, vegetable, cereal, vine fruit and nut tree, specialty crop, mushroom crop barn activities, as well as greenhouses with vegetable activities. Actively farmed forage and pasture land used for livestock activities are included, but those with primary horse activities are excluded. Bare and fallow lands and lands in transition are excluded. Although some nursery operations produce fruit trees, berry bushes and vegetable transplants, they are excluded as they are not the primary activity. Floriculture activities and greenhouses with floriculture and nursery activities are also excluded.

**INTENT**

*Metro 2040* aims to increase actively farmed land with an emphasis food production.
GOAL 3 MEASURES
Protect the Environment and Respond to Climate Change Impacts

Key Summary Measures
The following Key Summary Measures are listed in *Metro 2040* Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

Ecosystem Health
SENSITIVE ECOSYSTEMS QUALITY AND QUANTITY
Key Summary Measure

AS MEASURED BY
- Hectares of land inventoried as a Sensitive or Modified Ecosystem.
- Percent of inventoried Sensitive and Modified Ecosystems rated high quality.

REPORTING & TIMELINE
Five-year (anticipated) measure reported following each update of the Metro Vancouver Sensitive Ecosystem Inventory.

Regional totals and averages provided in annual reports as data is available. Breakdown by quality and subregion reported online as data is available.

SOURCE
Metro Vancouver Sensitive Ecosystem Inventory (geodata).

METHODOLOGY
The Sensitive Ecosystem Inventory (SEI) tracks ecosystems throughout the region as a means of monitoring ecological health. The SEI was developed using provincial standards and identifies and maps ecologically significant and relatively unmodified ‘Sensitive Ecosystems’, including wetlands, older forests and woodlands as well as some ‘Modified Ecosystems’ which are human modified but still have ecological value and importance to biodiversity (such as young forests).

The ‘quality’ of a Sensitive or Modified Ecosystem is determined through evaluation of condition, landscape context and size. Condition is an assessment of disturbance factors within and immediately adjacent to the area. Landscape context is an assessment of the land cover around an area and is a measure of the degree of fragmentation. Size is also considered because larger sites are generally better able to function more naturally than smaller sites of the same ecosystem.

INTENT
*Metro 2040* aims to protect and enhance natural features and their connectivity. The SEI provides information about change over time and can help to focus ecosystem protection and enhancement efforts.
# Climate Change Mitigation

## GREENHOUSE GAS EMISSIONS

**Key Summary Measure**

**AS MEASURED BY**
- Tonnes and percent of regional greenhouse gas emissions produced by building and on-road transportation sources.

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following each update of the Lower Fraser Valley Emissions Inventory.

**SOURCE**

The Lower Fraser Valley Emissions Inventory and Forecast and Backcast is developed approximately every five years.

**METHODOLOGY**

The 2010 emissions inventory provides information on the types of air emission sources in the Lower Fraser Valley, their location and the amount of air contaminants emitted, for the year 2010. Greenhouse gases included in the emissions inventory are, Carbon dioxide (CO₂), Methane (CH₄), and Nitrous oxide (N₂O). Of the greenhouse gases, CO₂ is the primary contributor and has the most relevant implications for climate change. Building emission sources include commercial, institutional and residential buildings, and on-road transportation sources include light-duty and heavy-duty vehicles.

**INTENT**

*Metro 2040* targets a 33% reduction in GHG emissions below 2007 levels by 2020, and an 80% reduction below 2007 levels by 2050.
<table>
<thead>
<tr>
<th>Climate Change Preparedness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLIMATE ADAPTATION PLANNING EFFORTS</strong></td>
</tr>
<tr>
<td>Proxy Key Summary Measure / Participation Measure</td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Climate adaptation planning efforts (proxy measure).

**REPORTING & TIMELINE**
Online and in annual reports as new information is available.

**SOURCE**
Baseline information derived from The Climate Adaptation Scan and Gap Analysis Report (2015). Updates requested from Regional Planning Advisory Committee as appropriate (approximately every 2-3 years).

**METHODOLOGY**
Climate change adaptation efforts are often embedded in other policy documents or management plans, such as Official Community Plans, development plans, detailed environmental management plans, general climate change plans, or emergency management plans. This measure specifically tracks natural hazard risk assessments, natural hazard management plans, or climate change adaptation plans by municipality.

**INTENT**
*Metro 2040* aims to improve the ability to withstand climate change and natural hazard risks (e.g. earthquake, flooding, erosion, subsidence, mudslides, interface fires).
Supplementary Measures

The following Strategy Performance, Context, and Participation Measures are supplementary to the Key Summary Measures. These measures may be reported out online as data and resources are available. The intent of supplementary measures is to illustrate progress, serve as a resource to member jurisdictions, and inform implementation.

### Ecosystem Health

**ENVIRONMENTAL PROTECTION EFFORTS**

Participation Measure

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Count of tools / mechanisms used by member jurisdictions to protect environmental areas.</td>
<td></td>
</tr>
</tbody>
</table>

**REPORTING & TIMELINE**

Online as new information is available.

**SOURCE**

Compiled by Metro Vancouver staff. Confirmed, and updates requested from Regional Planning Advisory Committee Environmental Subcommittee as appropriate (approximately every 2-3 years).

**METHODOLOGY**

Tools and mechanisms to protect important environmental areas may include:

- Environmental Management Plans (EMPs)
- Environmental Development Permit Areas (EDPAs)
- Designated Environmentally Sensitive Areas (ESAs)
- Watercourse protection bylaws
- Tree protection bylaws
- Conservation covenants
- Land trusts
- Tax exemptions

**INTENT**

Metro 2040 aims to protect, enhance, and restore ecologically important systems and features.
# Ecosystem Health

## AIR POLLUTANTS

### Strategy Performance Measure

**AS MEASURED BY**

- Number of pollutant exceedances of regional and national objectives and standards.

**REPORTING & TIMELINE**

Online as data is available.

**SOURCE**

Pollutant exceedances are tracked in the annual Integrated Air Quality and Greenhouse Gas Management Plan Progress Report produced by Metro Vancouver Air Quality.

**METHODOLOGY**

Exceedances of ambient objectives and standards are presented using the data from the Lower Fraser Valley Air Quality Monitoring Network, 28 air quality monitoring stations located from Horseshoe Bay to Hope. Metro Vancouver operates 22 of these stations in Metro Vancouver and 6 stations in the Fraser Valley in partnership with the Fraser Valley Regional District. Exceedances are reported for the following pollutants:

- Nitrogen dioxide
- Sulphur dioxide
- Ground-level ozone
- Fine particulate matter
- Other air contaminants

**INTENT**

*Metro 2040* aims to reduce energy consumption and greenhouse gas emissions, and improve air quality.
<table>
<thead>
<tr>
<th><strong>Climate Change Preparedness</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CLIMATE CHANGE PROJECTIONS</strong></td>
</tr>
<tr>
<td><strong>Context Measure</strong></td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Regional baseline and change projections for relevant climate variables.

**REPORTING & TIMELINE**
Online as data is available.

**SOURCE**
Climate Projections for Metro Vancouver (2015 report), supported by the Pacific Climate Impacts Consortium.

**METHODOLOGY**
The 2015 Metro Vancouver report provides an improved understanding of projected local climate change trends in temperature, precipitation, and related indices of extremes. The report is intended to describe a probable future and enable the region’s planners, engineers, and policy makers to make better-informed decisions on how to plan and adapt to changes ahead. The full report is available online and www.metrovancouver.org. Key indicators for the years 2050 and 2080 are provided online for monitoring, including:
- Daytime High Temperature
- Nighttime Low Temperature
- Precipitation (seasonal total, mm)
- Extreme Precipitation Intensity (1-in-20-year 1-day event, mm)
- Snowpack depth (April 1st watershed average)

**INTENT**
*Metro 2040* aims to improve the ability to withstand climate change. This measure provides regional climate change projections as context for anticipated impacts across the region.
## GOAL 4 MEASURES

### Create Complete Communities

**Key Summary Measures**

The following Key Summary Measures are listed in *Metro 2040* Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

<table>
<thead>
<tr>
<th>Housing Affordability</th>
<th>HOUSING + TRANSPORTATION COST BURDEN</th>
<th>Key Summary Measure</th>
</tr>
</thead>
</table>

**AS MEASURED BY**

- Percent of median household income spent on average housing + transportation costs.

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following the release of Census and Trip Diary data.

Regional cost burden provided in annual reports as data is available. Detailed housing and transportation costs, and a breakdown by subregion and median income level reported online as data is available.

**SOURCE**

- Statistics Canada Census / National Household Survey. Average annual housing costs for working households, including rent/mortgage, services, taxes, and fees.
- TransLink Trip Diary. Average annual transit and auto costs for working households (includes transit fares and cost of owning and operating a personal vehicle).

**METHODOLOGY**

Cost burden refers to the combined household expenditures on housing and transportation relative to gross household income. Methodology is detailed in the *The Metro Vancouver Housing and Transportation Cost Burden Study (2015)*.

Typically, if a household spends less than 30% of pre-tax on housing costs, then housing is considered affordable. However, housing and transportation choices are closely linked and represent the two largest expenditures for many working households.

**INTENT**

*Metro 2040* aims to provide diverse and affordable housing choices. This measure provides a comprehensive picture of affordability in the region.
## Housing Diversity

### ESTIMATED RENTAL HOUSING DEMAND ACHIEVED IN NEW SUPPLY

**Key Summary Measure**

**AS MEASURED BY**
- Share of estimated regional rental housing demand achieved in new supply.

**REPORTING & TIMELINE**

- Five-year (anticipated) measure reported following the release of Census data.
- Regional average provided in annual reports as data is available. Breakdown by household type and income level reported online as data is available.

**SOURCE**

- Statistics Canada Census / National Household Survey.

**METHODOLOGY**

- Housing demand estimates are provided in *Metro 2040*. Rental supply is monitored through Metro Vancouver’s Housing Data Book.

- **Income levels:**
  - Very low income (<$30,000)
  - Low income ($30,000-$50,000)
  - Moderate income ($50,000-$75,000)
  - Above moderate income ($75,000-$100,000)
  - High income ($100,000+)

- **Household types:**
  - Family Households
  - Non-family households

- Census family refers to a married couple and their children, if any, of either or both spouses; a couple living in common law and the children, if any, of either or both partners; or a lone parent of any marital status with at least one child living in the same dwelling and that child or those children. Non-Census families may have one or more persons.

### INTENT

*Metro 2040* aims to provide diverse and affordable housing choices. This measure monitors rental supply against anticipated demand as a key part of the housing continuum.
### Complete Communities and Health

**WALKABILITY**

Key Summary Measure

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Walkability.</td>
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<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
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<tbody>
<tr>
<td>Annual (anticipated) measure reported as data is available.</td>
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<th>SOURCE</th>
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<table>
<thead>
<tr>
<th>METHODOLOGY</th>
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<tbody>
<tr>
<td>TBD</td>
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<table>
<thead>
<tr>
<th>INTENT</th>
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</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to develop healthy and complete communities with access to a range of services and amenities.</td>
</tr>
</tbody>
</table>

Supplementary Measures

The following Strategy Performance, Context, and Participation Measures are supplementary to the Key Summary Measures. These measures may be reported out online as data and resources are available. The intent of supplementary measures is to illustrate progress, serve as a resource to member jurisdictions, and inform implementation.

### Housing Affordability

**AFFORDABLE HOUSING WITH ACCESS TO THE FREQUENT TRANSIT NETWORK**

**Strategy Performance Measure**

**AS MEASURED BY**

- Percent and number of social housing / non-market housing with access to the Frequent Transit Network.

**REPORTING & TIMELINE**

Online as data is available.

**SOURCE**

Metro Vancouver Regional Planning geodata for the *Metro 2040 Urban Centre / Frequent Transit Development Area (FTDA)* boundaries.

Frequent Transit Network (FTN) and rapid transit station geodata is provided by TransLink; latest versions are available upon request.

BC Housing Homeowner Protection Office, Member jurisdictions, BC Assessment Authority.

**METHODOLOGY**

Housing data is geocoded and overlaid with the FTN. The FTN is a network where transit service runs at least every 15 minutes in both directions throughout the day and into the evening, every day of the week. A 400 metre buffer around the FTN is used to identify a walk catchment (5-10 minutes) to frequent transit service, and an 800 metre buffer around rapid transit stations is used to identify a walk catchment (10-15) minutes to rapid transit service.

**INTENT**

*Metro 2040* aims to provide diverse and affordable housing choices. This measure monitors social housing / non-market housing development in locations with transit service, a key amenity for residents in these housing types, as an important part of the housing continuum.
## Housing Diversity

**COMPOSITION OF HOUSING STOCK**

*Context Measure*

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Composition of housing stock (type, tenure and cost).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual estimate and five-year (anticipated) measure reported following the release of Census data.</td>
</tr>
<tr>
<td>Metro Vancouver provides annual estimates based on CMHC Completions and Demolitions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Canada Census, not including estimated Census undercount.</td>
</tr>
<tr>
<td>CMHC Completions and Demolitions and Rental Market Activity reports.</td>
</tr>
<tr>
<td>Greater Vancouver Real Estate Board (GVREB), Fraser Valley Real Estate Board (FVREB).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type includes:</td>
</tr>
<tr>
<td>• Ground-oriented housing (single family and duplex)</td>
</tr>
<tr>
<td>• Row housing</td>
</tr>
<tr>
<td>• Apartment housing</td>
</tr>
<tr>
<td>Tenure includes:</td>
</tr>
<tr>
<td>• Owner-occupied</td>
</tr>
<tr>
<td>• Renter-occupied</td>
</tr>
<tr>
<td>• Band housing</td>
</tr>
</tbody>
</table>

Average rents are for purpose-built rental apartments with 3 units or more and are provided by CMHC Market Area. Multiple Service Listing (MLS) Housing Price Index (HPI) is the mid-year average and is broken down by GVREB and FVREB areas. Improved data sources for market rental costs are currently being explored.

<table>
<thead>
<tr>
<th>INTENT</th>
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</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to provide diverse and affordable housing choices. This measure monitors housing supply throughout the region as context for housing diversity.</td>
</tr>
<tr>
<td>Housing Diversity</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>MUNICIPAL HOUSING ACTION PLANS</td>
</tr>
<tr>
<td>Participation Measure</td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Status of municipal housing action plans.
- Count of municipal measures to support housing affordability and diversity.

**REPORTING & TIMELINE**
Online as data is available (approximately every 2-3 years).

**SOURCE**
Metro Vancouver data.

**METHODOLOGY**
Metro Vancouver tracks the status of municipal housing action plans (adopted, updated, or pending), as well as measures in support of housing affordability and diversity, including:
- Fiscal measures
- Planning policies
- Zoning/regulatory actions
- Approval processes
- Rental market incentives
- Rental housing loss prevention
- Education and advocacy

**INTENT**
*Metro 2040* aims to provide diverse and affordable housing choices. This participation measure monitors the status and implementation of municipal housing action plans, which assess local market conditions, identify housing priorities, identify implementation measures which may encourage new rental housing, where appropriate mitigate the loss of existing rental housing, and identify opportunities to participate with other levels of government to secure additional rental units.
### Complete Communities and Health

**AIR QUALITY HEALTH INDEX**  
Strategy Performance Measure

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percent of hours with the Air Quality Health Index (AQHI) in the High and Low health risk categories.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online as data is available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOURCE</th>
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</thead>
<tbody>
<tr>
<td>Air quality health index categories are monitored in the annual Integrated Air Quality and Greenhouse Gas Management Plan Progress Report produced by Metro Vancouver’s Air Quality and Climate Change division.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data for this performance measure originate from the Lower Fraser Valley Air Quality Monitoring Network. The AQHI is calculated based on the relative risks to human health from exposure to ground-level ozone, fine particulate matter and nitrogen dioxide.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTENT</th>
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</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to develop healthy and complete communities with access to a range of services and amenities. This measure monitors air quality as an important element of healthy communities.</td>
</tr>
</tbody>
</table>
## Complete Communities and Health

### HEALTH IMPACTS IN PLANNING AND DEVELOPMENT

**Participation Measure**

### AS MEASURED BY

- Count of official considerations of health impacts in planning and development.

### REPORTING & TIMELINE

Online as data is available (approximately every 2-3 years).

### SOURCE

Metro Vancouver data. Updates requested from Regional Planning Advisory Committee Social Issue Subcommittee as appropriate, based on information derived from Metro Vancouver Health Impact Assessment Guidelines.

### METHODOLOGY

Metro Vancouver collects information about the use of health impact assessments in municipal planning efforts.

### INTENT

*Metro 2040* aims to develop healthy and complete communities with access to a range of services and amenities. This participation measure tracks the consideration of health impacts in planning and development.
**GOAL 5 MEASURES**

Support Sustainable Transportation Choices

Key Summary Measures

The following Key Summary Measures are listed in *Metro 2040* Section G: Performance Monitoring. These measures will be reported out regularly as data becomes available to illustrate progress.

<table>
<thead>
<tr>
<th>Travel Mode Choice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODE SHARE</strong></td>
</tr>
<tr>
<td>Key Summary Measure</td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Percent of total trips that are private vehicle based.
- Total trips by mode, by region and municipality.

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following the release of TransLink Trip Diary data.

Regional share of trips that are private vehicle based reported online and in annual reports as data is available. Breakdown by mode and municipality provide online as data is available.

**SOURCE**
TransLink Trip Diary.

**METHODOLOGY**

TransLink’s Trip Diary estimates trip data on a typical fall weekday. Each trip is allocated to a mode (walking, cycling, transit, auto passenger, or auto driver).

Private vehicle-based trips include trips by auto driver and trips by auto passenger. Passenger trips are counted by the number of passengers in the vehicle for each trip (e.g. a single auto trip with one driver and three passengers is counted as one auto driver trip and three auto passenger trips).

**INTENT**

*Metro 2040* aims to encourage transit, multiple-occupancy vehicles, cycling, and walking.
### Travel Mode Choice

**TRANSIT ACCESSIBILITY**

**Key Summary Measure**

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percent of population living within walking distance of Frequent Transit Network (FTN).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five-year (anticipated) measure reported following the release of Census data.</td>
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</table>

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<tr>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistics Canada Census, including estimated Census undercount.</td>
</tr>
</tbody>
</table>

Frequent Transit Network (FTN) and rapid transit station geodata is provided by TransLink; latest versions are available upon request.

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>The FTN is a network where transit service runs at least every 15 minutes in both directions throughout the day and into the evening, every day of the week. A 400 metre buffer around the FTN is used to identify a walk catchment (5-10 minutes) to frequent transit service, and an 800 metre buffer around rapid transit stations is used to identify a walk catchment (10-15 minutes to rapid transit service. Census Dissemination Blocks are used to estimate population within these catchments.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to encourage transit, multiple-occupancy vehicles, cycling, and walking.</td>
</tr>
</tbody>
</table>

*Medium term goal*
### Road and Vehicle Use and Safety

#### VEHICLE KILOMETRES TRAVELLED

**Key Summary Measure**

**AS MEASURED BY**
- Annual per capita Vehicle Kilometres Travelled (VKT).

**REPORTING & TIMELINE**

Five-year (anticipated) measure reported following the release of TransLink Trip Diary data.

Regional per capita VKT is reported online and in annual reports as data is available. Breakdown by subregion is provide online as data is available.

**SOURCE**

TransLink Trip Diary.

**METHODOLOGY**

TransLink’s Trip Diary estimates trip data on a typical fall weekday. The average trip lengths of Auto Drivers is used to estimate the daily Vehicle Kilometres Travelled (VKT) of Metro Vancouver residents. These values are normalized using total population counts to further estimate weekday VKT per capita.

**INTENT**

*Metro 2040* aims to support the safe and efficient movement of vehicles for passengers, goods and services.
### Supplementary Measures

The following Strategy Performance, Context, and Participation Measures are supplementary to the Key Summary Measures. These measures may be reported out online as data and resources are available. The intent of supplementary measures is to illustrate progress, serve as a resource to member jurisdictions, and inform implementation.

<table>
<thead>
<tr>
<th>Road and Vehicle Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INSURED VEHICLES</strong></td>
</tr>
<tr>
<td><strong>Context Measure</strong></td>
</tr>
</tbody>
</table>

**AS MEASURED BY**
- Number of actively insured vehicles.

**REPORTING & TIMELINE**
Online as data is available.

**SOURCE**
Insurance Corporation of British Columbia Report for Active Vehicle Count by City and Vehicle Type, Metro Vancouver.

**METHODOLOGY**
Reports provided monthly. Report annual average for year by municipality.

**INTENT**
*Metro 2040* aims to support the safe and efficient movement of vehicles for passengers, goods and services.
## Road and Vehicle Use and Safety

### COLLISION STATISTICS

**Context Measure**

<table>
<thead>
<tr>
<th>AS MEASURED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Collision statistics, including fatalities and injuries for the region as made available by ICBC.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REPORTING &amp; TIMELINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure contingent on ICBC reporting.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOURCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Corporation of British Columbia data, as available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>METHODOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICBC has made collision injury and fatality statistics available by region in the past, however, reporting is currently being updated.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Metro 2040</em> aims to support the safe and efficient movement of vehicles for passengers, goods and services.</td>
</tr>
</tbody>
</table>
## POTENTIAL FUTURE MEASURES

To Be Explored

This section includes a list of measures that would improve monitoring, but cannot yet be tracked due to data availability or resource constraints.

<table>
<thead>
<tr>
<th>Growth in Priority Areas</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAJOR TRIP GENERATORS</td>
<td></td>
</tr>
<tr>
<td>Future Strategy Performance Measure</td>
<td></td>
</tr>
</tbody>
</table>

### POTENTIAL MEASURES
- Number of new Major Trip Generators locating outside of Urban Centres and FTDAs.

### INTENT

*Metro 2040* aims to focus population and employment growth to Urban Centres and FTDAs and reduce the share of private vehicle trips.

### LIMITATION

Requires an established definition for Major Trip Generators.

<table>
<thead>
<tr>
<th>Industrial Areas</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDUSTRIAL DENSITY</td>
<td></td>
</tr>
<tr>
<td>Future Strategy Performance Measure</td>
<td></td>
</tr>
</tbody>
</table>

### POTENTIAL MEASURES
- To be determined.

### INTENT

*Metro 2040* aims to protect the supply of industrial land, in part through industrial intensification.

### LIMITATION

There are several forms of intensification that cannot all be accurately measured through a single measure of density (e.g. jobs per area, throughput per area, etc.). An appropriate measure may be established when resources permit, following the Regional Industrial Lands Initiative.
Ecosystem Health
ECOLOGICAL CONNECTIVITY
Future Strategy Performance Measure

POTENTIAL MEASURES
• Ecological Connectivity Index.

INTENT
Metro 2040 aims to protect, enhance, and restore ecologically important systems and features.

LIMITATION
Index may be developed using the Sensitive Ecosystem Inventory and Land Cover Classification when resources permit.

Ecosystem Health
STATUS OF CONSERVATION AND RECREATION AREAS
Future Strategy Performance Measure

POTENTIAL MEASURES
• Protection status of Conservation and Recreation areas.

INTENT
Metro 2040 aims to protect, enhance, and restore ecologically important systems and features.

LIMITATION
Measure dependent on the Metro Vancouver protected areas layer, which is currently under development.
### Climate Change Mitigation

**ENERGY USE**

Strategy Performance Measure

<table>
<thead>
<tr>
<th>POTENTIAL MEASURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Kilowatt-hours energy use per capita and by region.</td>
<td></td>
</tr>
</tbody>
</table>

**INTENT**

*Metro 2040* aims to reduce energy consumption and greenhouse gas emissions, and improve air quality.

**SOURCE**

Detailed data not currently available.

### Climate Change Preparedness

**PEOPLE AND INFRASTRUCTURE AT RISK**

Future Strategy Performance Measure

<table>
<thead>
<tr>
<th>POTENTIAL MEASURES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Population and value of public assets in hazard areas.</td>
<td></td>
</tr>
</tbody>
</table>

**INTENT**

*Metro 2040* aims to improve the ability to withstand climate change.

**LIMITATION**

Detailed data on specific areas at risk, and associated adaptation efforts is not yet available.
### Climate Change Preparedness

**ECOLOGICAL ASSETS AT RISK**

**Future Strategy Performance Measure**

**TBD**

**POTENTIAL MEASURES**
- Value of ecological assets at risk.

**INTENT**

*Metro 2040* aims to improve the ability to withstand climate change.

**LIMITATION**

Detailed data on specific areas at risk, and associated adaptation efforts is not yet available. Appropriate use of ecosystem valuation figures has not yet been determined.

### Complete Communities and Health

**SHAPING OUR COMMUNITIES PERCEPTION MEASURES**

**Future Key Summary Measure**

**TBD**

**POTENTIAL MEASURES**
- To be determined.

**INTENT**

*Metro 2040* aims to develop healthy and complete communities with access to a range of services and amenities.

**LIMITATION**

Shaping our Communities Survey is planned for 2016/2017. Perception data is intended to provide measures related to complete communities and quality of life.
### Road and Vehicle Use

**TRAVEL TIME RELIABILITY**  
Future Key Summary Measure  

**POTENTIAL MEASURES**  
- Travel time reliability (variation in travel time from day to day, or week to week).

**INTENT**  
*Metro 2040* aims to support the safe and efficient movement of vehicles for passengers, goods and services.

**LIMITATION**  
Metro Vancouver aims to work with TransLink on developing a measure related to travel time reliability or congestion.

### Road and Vehicle Use

**GOODS MOVEMENT MEASURE**  
Future Key Summary Measure  

**POTENTIAL MEASURES**  
- Goods movement measure.

**INTENT**  
*Metro 2040* aims to support the safe and efficient movement of vehicles for passengers, goods and services.

**LIMITATION**  
Following the completion of TransLink's Goods Movement Strategy, a goods movement measure may be included.
APPENDIX I
Index of Performance Measures

Below is a complete list of Regional Planning performance measures related to Metro 2040. Key Summary (KS) measures are listed in Section G of Metro 2040. Strategy Performance (SP), Context (C), and Participation Measures (P) are listed in the Supplementary Measures sections of this document.

REGIONAL LAND USE MEASURES
Designations and Overlays
• Regional Land Use Designations (KS)
• Regional Land Use Overlays (KS)

GOAL 1: CREATE A COMPACT URBAN AREA
Contain Development
• Growth within the Urban Containment Boundary (KS)
• Remaining Urban Development (SP)
• Annual Growth (C)

Growth in Priority Areas
• Residential development in priority areas (KS)
• Density in priority areas (SP)

Protect Other Lands
• Sewer service connections (SP)
• Rural development (SP)

GOAL 2: SUPPORT A SUSTAINABLE ECONOMY
Employment in Priority Areas
• Job growth in priority areas (KS)
• Office development in priority areas (SP)
• Retail development in priority areas (SP)

Employment Accessibility
• Commute time and distance (KS)
• Employment levels (C)
• Employment types and locations (C)
• Employment close to home (SP)

Industrial and Mixed Employment Areas
• Industrial and Mixed Employment Land Use (KS)

Agricultural Areas
• Agricultural Land Use (KS)
• Active food producing lands (SP)

GOAL 3 PROTECT THE ENVIRONMENT AND RESPOND TO CLIMATE CHANGE IMPACTS
Ecosystem Health
• Sensitive Ecosystem quality and quantity (KS)
• Air pollutants (SP)
• Environmental protection efforts (P)

Climate Change Mitigation
• Greenhouse gas emissions (KS)

Climate Change Preparedness
• Climate adaptation efforts (KS)
• Climate change projections (C)

GOAL 4: DEVELOP COMPLETE COMMUNITIES
Housing Affordability
• Housing + Transportation Cost Burden (KS)
• Affordable housing with access to the Frequent Transit Network (SP)

Housing Diversity
• Rental housing demand achieved in new supply (KS)
• Composition of the housing stock (C)
• Municipal housing action plans (P)
Complete Communities and Health

- Walkability Index (KS)
- Air quality health index (SP)
- Health impacts in planning in development (P)

GOAL 5: SUPPORT SUSTAINABLE TRANSPORTATION CHOICES

Travel Mode Choice

- Transit accessibility (KS)
- Mode share (KS)

Road and Vehicle Use and Safety

- Vehicle kilometres travelled (KS)
- Collision statistics (C)
- Insured vehicles (C)